NGDA Dataset Report

Official NGDA Title: NOAA Coastal Mapping Remote Sensing Data

Metadata Record Title: NOAA Coastal Mapping Remote Sensing Data

A–16 NGDA Theme: Imagery

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Metadata:

Registration Status: Complete
Registered on 3/10/2015

GeoPlatform Link*: http://www.geoplatform.gov/node/243/331ada7a-3655-4880-bbf1-9149b46122b7

Data.gov Metadata Link*: http://catalog.data.gov/harvest/object/67216566-c5fc-4fd8-bf15-c1c7d3057f4b/html

*If the metadata has been updated and reharvested after publication of this report, the link may no longer be valid. The dataset may be searched for manually in Data.gov or GeoPlatform.gov.

NGDA Lifecycle Maturity Assessment (LMA) Report

Time Frame:

The first shoreline survey (T-Series) map was published in 1834.

LMA Submission:

Status: Complete

Date: 10/5/2015

Extension Requested: No

LMA Reviewer(s):

Supervisor: Did not review

Theme Lead: Robert Pierce

Executive Champion: Did not review

SAOGI*: Did not review

Other: Did not review

LMA Verifier:

Name: Robert Pierce

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Attachments:

To get access to any attachments referenced in the report, email the LMA Help Desk at NGDA_LMA_help@fgdc.gov. Please use the subject "Dataset Report Attachment(s)" and indicate the associated official NGDA title.

*Senior Agency Official for Geospatial Information (SAOGI)

Lifecycle Maturity Assessment (LMA) Summary

Overall Maturity:

Optimized; Established

General Questions: 100%

Optimized; Established

Stage 1 - Define/Plan: 100%

Optimized; Established

Stage 2 - Inventory/Evaluate: 100%

Optimized; Established

Stage 3 - Obtain: 88%

Mature; Consistent

Stage 4 - Access: 100%

Optimized; Established

Stage 5 - Maintain: 82%

Mature; Consistent

Stage 6 - Use/Evaluate: 100%

Optimized; Established

Stage 7 - Archive: 100%

Optimized; Established

NGDA Dataset Maturity Definitions:

How To Calculate Maturity: https://www.geoplatform.gov/sites/default/files/How_to_Calculate_Maturity.pdf

Maturity	Maturity Characteristics for All Lifecycle Stages
Optimized; Established Rank = 5	Dataset meets virtually all business needs of all users. The dataset is considered authoritative by owners and secondary users. It is curated across all stages of the approved lifecycle. Future needs are defined on a regular basis and resources for addressing both current and future business requirements are available.
Mature; Consistent Rank = 4	Dataset meets all the business needs of the primary owner and most of the secondary users. The dataset is curated and used as authoritative by the primary owner. Dataset is used widely by secondary users actively engaged in sustaining the dataset. Future needs are identified and steps are planned to address these. All stages are supported and reviewed on a recurring basis. The dataset is well managed in relation to the approved lifecycle.
Managed; Predictable Rank = 3	Dataset meets a significant number of the business needs of the primary owner and is widely used as an authoritative resource by secondary users. Benchmark activities are occurring in at least four of the approved lifecycle stages. Management practices in relation to the approved lifecycle is moderate but consistent. Dataset is integrating changing business requirements in lifecycle stages impacting overall maturity.
Transition; Transformation Rank = 2	Dataset meets business needs of the primary owner and has moderate use by secondary users. Benchmark activities are occurring in at least three stages. Efforts to integrate funding, include partners, and obtain data are not supported in a sustained manner. Management practices in relation to the stages of the approved lifecycle is limited.
Planned; Initial Development Rank = 1	Dataset limited in meeting business needs of the primary owner. Benchmark activities in the approved lifecycle are just starting to consider secondary uses, partnerships are forming to support additional dataset uses. Dataset development is in a very early stage. Minimal or limited management against the benchmarks in the approved lifecycle.
No Activity Rank = no activity	Dataset meets project or local business needs of the primary owner, secondary or additional uses or users were not considered, not recognized as an authoritative data or is part of a similar dataset. Not managed to any of the benchmarks in the approved lifecycle.

General Questions for All Stages

1) Is there a recurring process to obtain funding for all lifecycle stages of this dataset?

Answer: Funding support is part of agency budget on a recurring basis, funding is consistent and tied to business processes, and supports all lifecycle stages.

Justification Comment: **Attachment(s):** 0

Funding for all lifecycle stages of NOAA Coastal Mapping Remote Sensing Data is included in the National Ocean Service budget for Navigation, Observations and Positioning including NOAA's physical oceanographic activities conducted under the Coast and Geodetic Survey Act, the Hydrographic Services Improvement Act, the Integrated Coastal and Ocean Observation System Act, and the Ocean and Coastal Mapping Integration Act.

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2) Is there a process in place to ensure that open government and transparency guidelines are followed in all lifecycle stages for this dataset?

Answer: Process is published as appropriate with respect to sensitivity requirements, process is transparent, published appropriately.

Justification Comment: **Attachment(s):** 0

Management of this dataset follows all scientific data management per the NOAA Administrative Order "NAO 202-735D: Scientific Integrity." NAO 202-735D outlines how NOAA complies with Open Government and Transparency requirements for all scientific data. See http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/202-735-D.html for more information.

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3) Are there processes and tools in place so that staff are sufficiently knowledgeable to ensure a continuity of the dataset for all stages of the lifecycle, especially during staffing transitions?

Answer: Processes and tools to ensure dataset continuity are in place and implemented for all lifecycle stages.

Justification Comment: **Attachment(s):** 0

The Coastal Mapping Program has training and rigorous internal and external documentation repository including Remote Sensing Field Operations Manual, Scope of Work Shoreline Mapping, Policy and Procedure Memorandums, various user manuals, publications, and other documentation to preserve, protect, and provide continuity of the datasets. The Scope Of Work references may be found at: http://www.ngs.noaa.gov/ContractingOpportunities/reference_links.shtml

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STAGE 1 - Define/Plan

4) Are user and business requirements defined and formalized?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment: **Attachment(s):** 0

NGS has processes in place to solicit and document input from the primary users. This includes request from the Regional Navigation Managers that get input from other partners/stakeholders. These requirements are inserted into a GIS planning tool (FIDO) and the accompanying Project Instructions are circulated for approval.

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5) How are partners/stakeholders involved in the requirements collection process?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment: **Attachment(s):** 0

Partners/stakeholers are involved in the requirements collection process through

NGS.Shoreline.Request including the request from the Regional Navigation Managers that get input from other partners/stakeholders. NGS yearly attends national and technical conferences to engage with the user community. NGS get other user requirements from participating in meetings such as Alaska Mapping Executive Committee and Integrated Ocean and Coastal Mapping.

6) Is there a quality assurance process for the dataset?

Answer: Quality assurance published as appropriate with respect sensitivity requirements.

Justification Comment: **Attachment(s):** 0

NGS has a rigorous quality assurance process to identify if data meet QC standards and are ready for dissemination. The data is reviewed and quality controlled at multiple levels. Documentation includes the Remote Sensing Field Operations Manual, Scope of Work Shoreline Mapping, and Policy and Procedure Memorandums.

7) Is there a process to evaluate the sensitivity, privacy, and confidentiality of this dataset?

Answer: Sensitivity, privacy, and confidentiality evaluations fully implemented, reviewed and updated on a recurring basis.

Justification Comment: **Attachment(s):** 0

There is no sensitive, private, or confidential information associated with the data. The data is posted on a public website.

8) Are defined data standards used in collecting, processing, and/or rendering the data?

Answer: Standards fully implemented documented and published as appropriate.

Justification Comment: **Attachment(s):** 0

Data is provided in standard GIS (i.e. ESRI shapefile, tiff, and jpeg) and lidar formats.

STAGE 2 - Inventory/Evaluate

9) Is there a process for determining if data necessary to meet requirements already exist from other sources (either within or outside the agency) before collecting or acquiring new data?

Answer: Process for determining appropriate data is being reused fully implemented, reviewed, and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

NGS is the authoritative source for accurate, reliable, consistent, and timely tidal-datum-based shoreline data that supports safe and efficient maritime commerce, coastal management, and recreation. Tidal-datum based shoreline requires strict data acquisition requirements that may include ice free conditions, sun angle of at least 25 degrees, clear skies, and tide coordination. Since most commercial imagery is not tide coordinated in many cases it is not usable for consistent tidal-datum based shoreline. Due to beach slope alone the instantaneous shoreline between a single tide cycle may vary from 1 to 100 meters or more. Laura J. Moore (Journal of Coastal Research - July 2006) compares differences in high water stating: "Even for a moderately steep beach, a large offset will typically exist, both horizontally and vertically, between the visual High Water Line shoreline proxy and the datum-based Mean High Water intercept. This is validated by comparing the Assateague Island, Virginia, study area, having an average foreshore beach slope of tan 0.07 and an average horizontal offset value of 18.8 m, with the Long Beach Peninsula, Washington, study area, having an average foreshore beach slope of tan 0.02 and an average offset value of 30.6 m".
Data searches are made for existing data including IOCM data before new data is acquired.

STAGE 3 - Obtain

10) Is there a process for obtaining data in relation to this dataset?

Answer: Process is fully implemented, reviewed and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

With strict data acquisition requirements for tidal-datum-based shorelines NGS acquires much of the remotely sensed data following the established Remote Sensing Field Operations Manual, Scope of Work Shoreline Mapping, and Policy and Procedure Memorandums. To reduce redundancies and improve efficiencies data when applicable searches are made for sources such as Integrated Ocean and Coastal Mapping JALBTCX and satellite imagery using ClearView contract to DigitalGlobe.

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11) Is the metadata in a FGDC endorsed geospatial metadata standard?

Answer: Metadata is available in a format endorsed by the FGDC, it fully describes the dataset and provides all the information required to make the dataset discoverable, accessible, and usable.

Justification Comment: **Attachment(s):** 0

Metadata for the dataset fully describes the dataset and how to use it. Keyword tags and associated information has been entered and to make it discoverable via Data.gov, GeoPlatform.gov, and other catalogs.

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12) How complete is the geographic coverage as defined in the requirements for the dataset?

Part 1 Answer: Business requirement targets are on track, milestones are being met.

Part 2 Answer: Dataset has presently attained the greatest geographic coverage as defined by the current requirements or roughly 100%.

Justification Comment: **Attachment(s):** 0

Many shorelines are dynamic and in constant flux due to tidal influences, meteorological events, development, recreational management, and sea level changes. There is a continuous need to update shoreline to support safe and efficient maritime commerce, coastal management, and recreation. The requirements for FY16 are 4.2% update of our nations shoreline and 43 ports (~25%) of our nations priority ports.

STAGE 4 - Access

13) Do you have a process for providing users access to the data in an open digital machine readable format?

Answer: User access process is fully implemented, data is available, process is reviewed and updated on a recurring basis.

Justification Comment: **Attachment(s):** 0

Remotely sensed data are in standard GIS and lidar formats that is available on a geospatial data discovery and access tool (Digital Coast) with custom download options for elevation(lidar), land cover, imagery, and other data. Imagery and lidar may be downloaded from http://coast.noaa.gov/dataregistry/search/collection

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STAGE 5 - Maintain

14) Is there a maintenance process for updating and storing the dataset?

Answer: Dataset maintenance process is fully implemented and processes are reviewed and periodically updated.

Justification Comment: **Attachment(s):** 0

NGS has a well-defined process for updating and storing the underlying raw remotely sensed data. Data storage and access sites for processed remotely sensed data include:

http://coast.noaa.gov/dataregistry/search/collection/info/coastallidar

https://geo-ide.noaa.gov/wiki/images/8/8d/LidarDataMgmtPlan.doc.pdf

http://coast.noaa.gov/dataregistry/search/collection/info/highresortho?redirect=301ocm

http://www.ngs.noaa.gov/web/APOS2/APOS.shtml

There are internal meetings including the Data Management Committee and NGS Information Technology Review Board and internal documentation discussing dataset requirements, policies, hardware and software needs, backup solutions, etc.

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15) Is there an error correction process as part of dataset maintenance?

Answer: Error correction process established.

Justification Comment: **Attachment(s):** 0

NGS has a detailed SOPs to identify errors in data. There are internal documentation on quality control procedures, Policy and Procedure Memorandum, and Scope Of Work:

http://www.ngs.noaa.gov/ContractingOpportunities/shoreline_mapping_photography.shtml

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STAGE 6 - Use/Evaluate

16) Is there a process to determine if the dataset meets user needs?

Answer: Process is fully implemented and repeated on a recurring basis.

Justification Comment: **Attachment(s):** 0

Primary users are integral to the process. Any user needs for changes are addressed immediately. Other users are able to provide feedback to the OCS Regional Navigation Managers.

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17) Is there a process to provide users information on how to access and properly use the dataset?

Answer: Process is fully implemented supporting access and proper use, process is reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

The data download website contains a link to frequently asked questions and links to other domestic datasets. The content is reviewed with each update to the dataset as well as by OCS' Webmaster. The detailed metadata also provides more information about proper use. Examples include Emergency Response Imagery: http://storms.ngs.noaa.gov/eri_page/index.html and lidar at http://coast.noaa.gov/dataregistry/search/collection/info/coastallidar

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18) Are the business processes and management practices assessed to meet changing technology?

Answer: Assessment process is fully implemented for taking advantage of changing technology, process is reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

Data management processes and practices are kept up to date with the current user technology. Digital Coast has a formal process for assessing and responding to changes in technology and customer needs.

Personnel keep abreast of current technologies by attending conferences and working with industry leaders in acquisition technologies. Obtain feedback from customers through surveys including Foresee Customer Satisfaction (http://www.foresee.com/)and NGS Insight (an internal stateholders feedback newsletter). Program developers discuss new technologies and trends for possible adoption.

Within NOAA, the NOAA Integrated Ocean and Coastal Mapping Coordination Team work together to meet NOAA's mapping needs, modify projects to meet more than one objective, and improve NOAA's ability to use data for multiple applications (i.e., bathymetry for charting and bottom type for habitat mapping). NOAA also partners with federal, state, and local governments and non-governmental

organizations to develop mapping standards and techniques, improve data management and access, and implement cooperative projects. These partnerships include specific projects, joint research efforts, and established ocean policy groups such as the federal Interagency Working Group on Ocean and Coastal Mapping. (http://iocm.noaa.gov/)

STAGE 7 - Archive

19) Is there an archiving process for the dataset?

Answer: Archival and disposition processes are fully implemented.

Justification Comment: **Attachment(s):** 0

Remotely sensed data is archived at National Centers for Environmental Information as the archive data repository.